Comments on CEC Draft Goals: *Statewide Energy Efficiency Potential Estimates and Targets for California Utilities*

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Introduction

- Presenting personal comments and recommendations, not those of employer or clients
- Author of numerous EE potential, evaluation, and planning studies
 - 2002 CA SW Secret Surplus, 2003 CA Commercial IOU studies, 2004 Idaho Power, 2006 LADWP, 2006 PNM, many others from late 1980s/early 1990s
- Currently Sr. Director, Itron Inc. Formerly SVP Quantum Consulting, VP XENERGY

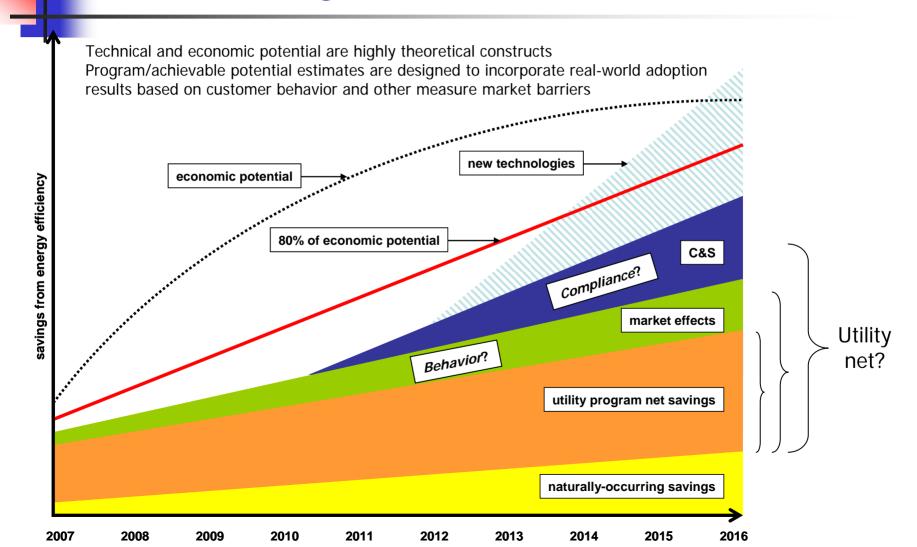
Introduction

- Governor, Legislature, CEC, CPUC should be commended for their efforts to dramatically increase the importance of energy efficiency (EE) in CA.
- SB 1037, AB32, AB2021 are historic
- Since late 70s, support for EE has gone through several cycles of boom and bust
- In the past decade alone, EE in CA has been governed by widely varying policy regimes
- Accomplishments and lessons learned through these decades are many
- Build on these lessons to develop goals and policies that will result in real, lasting accomplishments that support EE for the long haul

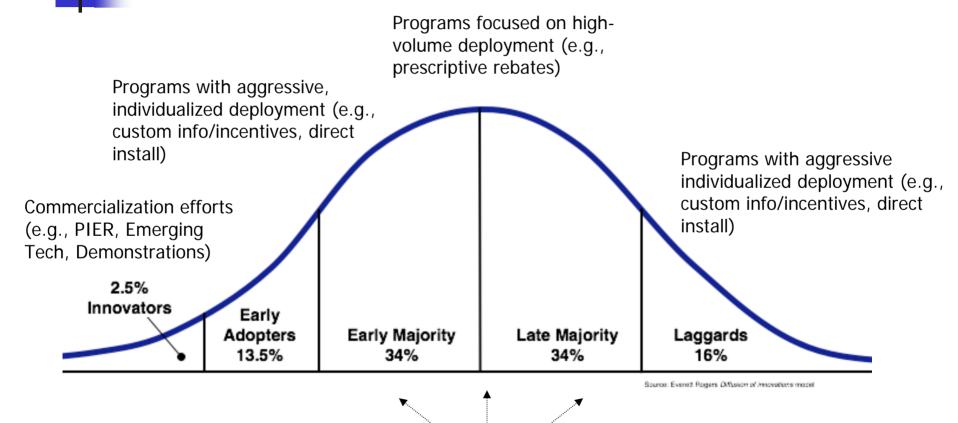
Overview of Comments

- The recommendation that goals be set at 80% of economic potential is extremely aggressive
- It is difficult to assess the plausibility of the recommended goal because the report does not make clear the operational policies necessary to achieve such a goal
- It appears that the proposed goals are intended to be achieved exclusively by utilities using voluntary programs
 - If this is the case, achievement of the goal is highly unlikely
 - Even under *mandatory* Codes and Standards, compliance may not reach 80%
- Maximizing real EE accomplishments will require a highly integrated partnership among private and public entities focused on EE accomplishments at a societal level, <u>inclusive</u> of:
 - voluntary utility programs, codes and standards, governmental programs, and the market effects (and behavioral changes) stimulated by these and other national and international efforts

The Many Faces of Potential



Technology Diffusion and Program Life-Cycle



Codes and Standards

Comments on Achievable Utility Program Potential

- Why is 80% of economic potential unrealistic for <u>voluntary</u> utility programs?
 - Market adoption will vary widely by measure
 - 80% market penetration is a ceiling, only sometimes achievable for a particular measure, over the long-term
 - Many measures will not achieve close to 80% due to market barriers and service features
 - The goal should reflect the expected weighted average market penetration for the entire portfolio
 - 80% would inappropriately constrain program design
 - In the short-term, this typically requires very high incentives (e.g., 100% of measure costs) and direct installation (DI) kinds of interventions
 - Although DI programs have a time and place in a portfolio, there are also many other types of interventions that are more cost-effective in the long run
 - Many measures do not lend themselves to this type of DI approach
 - If 80% is the goal, there should be an explicit link to Codes and Standards for many measures and a compliance plan

Comments on Report

- CEC draft report Strengths:
 - Reflects significant staff effort, data collection, and analysis
 - Is thoughtful, well organized, and well written
 - Takes very seriously the intent of AB2021, SB1037, and AB32
 - Goes to significant lengths to assess each POU individually and ramp up capabilities
 - Seeks to create an aggressive, visionary environment for EE in CA

Comments on Goals/Process

- CEC draft report/goal-setting process Concerns:
 - Does not justify use of economic potential rather than program potential as basis for voluntary program goal setting
 - Does not adequately discuss estimates of program potential from existing IOU potential studies and underlying assumptions
 - Achievable potential estimates are typically 30-50% of economic potential
 - Understates the difficulty of achieving 80% of economic potential in 10 years
 - Does not adequately discuss how voluntary utility programs and other state efficiency efforts would work in consort to achieve goals
 - Does not adequately discuss extent to which current or future CPUC and CEC policies optimally motivate utilities re societal goal
 - Utilizes peak demand estimates for IOUs that likely significantly over estimate impacts relative to energy (i.e., peak-to-energy ratio in current CPUC goals not based on bottom up end use/measure load shapes)
 - Does not adequately discuss uncertainty (e.g., magnitude, symmetry)

Recommendations

- CA should continue to aggressively pursue cost-effective EE as the first resource in the resource loading order
- Set statewide goals that are inclusive of utility and non-utility EE efforts
- Utility goals should be aggressive but plausible with some room to exceed
- Utility goals should be based on program potential forecasts that reflect a realistic mix of program strategies and incentive levels
- If economic potential were to be used as a benchmark, accomplishments from voluntary utility incentive programs should not be expected to exceed 50% of economic potential
- Utility goals should be set based on the expected accomplishments from ex post not ex ante estimates (and ex ante to ex post differences need to be reduced)
- Goals and associated policies should be developed to encourage long-term accomplishments across all measures (i.e., to avoid short-term focus on only lighting)
- Consideration should be given to measure and track all EE accomplishments against a frozen efficiency baseline at a societal level (e.g., naturally occurring, longterm market effects, short-term program effects, codes and standards, national/international initiatives)
- Refined policies and incentives are needed to further align the interests of utilities and society (progress has been made with IOUs but more refinement is needed)